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AUTHOR Larson, Katherine A.
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ABSTRACT

Student characteristics associated with school failure and school dropouts are well documented. This study sought to determine if a subgroup of students could be differentiated prior to high school as at highest risk for secondary school failure and dropout. It also attempted to describe behavioral, academic, and familial differences and similarities between the hghest-risk students and their at-risk peers during the first 2 years of junior high school. Subjects (N=351) were sixth-graders who were rated by classroom teachers on the need for supervision; level of motivation; academic potential; social interaction skill; and teachability. Based on results, 78 students were classified as highest risk (HstR) and 273 were classified as at-risk (AR); the groups were reduced in size but retained the statistical characteristics of the original pools; i.e., HstR was reduced to 24 students and AR to 29. In terms of junior high school adjustment, the HstR students could be distinguished from the AR students on intensity of unacceptable behavior. Results showed that AR students received significantly better report card grades than HstR students in academics as well as in work habits and cooperation. The HstR students were not absent more often than the AR students. In terms of predicting eighth grade adjustment, the teacher scale accounted for a statistically significant proportion of eighth grade variance for both groups in selective truancy, periods absent, report card grades, work habit grades, and cooperation grades. Results lend strong initial support to pursuing research efforts testing the efficacy of targeting HstR students on the five item characteristics. (ABL)

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EARLY SECONDARY SCHOOL ADJUSTMENT FOR AT-RISK AND HIGHEST-RISK STUDENTS

Katherine A. Larson
Graduate School of Education
University of California at Santa Barbara

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Early Secondary School Adjustment for At-Risk and Highest-Risk Students

Background

Student characteristics associated with school failure and school dropout are well documented. Some of these are low family income, English as a second language, poor academic achievement and school behavior problems (Ekstrom et al., 1986). Hispanic and Black American students who have these characteristics appear to be at greatest risk for school failure.

During the last five years there has been considerable effort and interest in developing programs and reforming schools in order to increase school achievement and reduce school dropout. Unfortunately, many school-failure prevention and dropout recovery efforts assume that poor achieving low-income minority students are a homogeneous group and that all or most of these students would benefit from similar programs and common school reform measures. Additionally, most prevention and recovery efforts focus on high school and post high school age students. Rumberger (1986) and others have pointed out the need to (1) differentiate subgroups of potential school dropouts, (2) identify those students most at risk for dropping out, and (3) determine how to target highest risk students before they reach high school age.

Research Objectives

The purpose of this research was twofold. First, given a population of low-income minority students attending schools with high dropout rates and poor academic achievement scores, to determine within this seemingly homogeneous population of students if there is a subgroup of students who can be differentiated prior to high school as at highest risk for secondary school failure and dropout. Second, to describe behavioral, academic and familial

differences and similarities between the highest-risk students and their at-risk peers during the first two years of secondary school

Methods

Subject Selection

All sixth grade students attending three elementary schools which were feeder schools to two junior high schools with a post ninth grade dropout rate greater than 50% were selected as the subject pool. Students attending these schools were considered to be at risk for school failure and/or school dropout because the schools had academic achievement averages were below state and national norms and because the students were economically disadvantaged and from racial minority groups. All of these characteristics have been consistently associated with school failure and or school dropout (see California State Board of Education, 1986).

All students (n = 351) in thirteen sixth grade classrooms were rated by classroom teachers on a likert-type five-item teacher rating scale evaluating the student's (1) need for supervision, (2) level of motivation, (3) academic potential, (4) social interaction skill, and (5) teachability. This scale was previously used by Shavelson, Cadwell, and Izu (1977) and Pullis and Cadwell (1982) to measure student characteristics related to teacher decision making. This rating scale has also been found to predict special education referral at both the elementary (Gerber and Semmel, 1985) and secondary (Larson, 1985) school level.

For each classroom, the classroom mean and standard deviation of each of the five scale items were calculated. Every student within a given classroom was assigned a "troublesome" score which was the total number of rating scale items he or she was one standard deviation below their classroom mean (i.e., troublesome scores ranged from 0 to 5). Students were targeted as highest-risk (HstR) if they were at least one standard deviation above their classroom mean on the troublesome score. Approximately six students from each classroom were targeted as HstR (n = 78) using this method. All other students (n = 273) were categorized as at-risk (AR).

Because it would be difficult to differentiate non-English language usage from other causes of school failure or performance difficulties, a determination was made to eliminate non-English speaking students from the subject pool. Consequently, the HstR pool was reduced to 58 students because twenty non-English speaking students were eliminated and the AR pool was reduced to 268 students because five non-English speaking students were eliminated. Bilingual students remained in the subject pool.

Half (n = 29) of the students in the HstR group were randomly selected as experimental subjects in another but related study. The remaining 29 HstR sixth grade students served as a comparison group for the present study and served as no treatment controls for the other study.

Other research has documented that school (Good and Brophy, 1986) and sex of the student (Irvine, 1985) are strongly related to school adjustment. Therefore, AR students were stratified by sixth grade classroom, sex and junior high school and then randomly selected to form an AR comparison group of 29 students similar to the HstR group in terms of sex distribution and school of attendance.

The HstR group was reduced because five students moved away just prior to junior high school. Thus, the final junior high comparison groups were HstR, n = 24 and AR, n = 29. These groups were not statistically different from their respective "original" pools (n = 58 and n = 268) in terms of race, age, teacher ratings and academic achievement scores. Thus, the final groups were assumed representative of the larger population of students within these schools.

Table 1 describes each group in terms of the 5-item teacher rating, academic achievement rank according to national norms of the Comprehensive Test of Basic Skills (CTBS) sex, race and age characteristics. The AR students had significantly higher teacher ratings on every item of the 5-item scale, need for supervision $t(50) = 9.66$, $p < .001$, motivation $t(50) = 6.18$, $p < .001$, social interaction skill $t(50) = 4.005$, $p < .001$, academic potential $t(50) = 5.20$. $p < .001$, and teachability $t(50) = 7.73$, $p < .001$. The HstR students had strikingly lower scores than AR peers in terms of

CTBS academic achievement in reading, $t(50) = 4.28$, $p < .001$, math, $t(51) = 4.87$, $p < .001$, spelling $t(46) = 4.18$, $p < .001$ and language, $t(45) = 4.86$, $p < .001$.

Insert Table 1 about here

Procedures

Every twenty weeks during the first two years of junior high school, with the permission of parents and school district officials, data were obtained on the HstR and AR students from school records, student interviews and teacher ratings. School staff, teachers and students were told that the purpose of the study was to discover ways to reduce school dropout. Staff and students were not aware of the subject groups or dependent variables under consideration. Groups were compared on classroom and school disciplinary incidents, allocation of school resources as a function of disciplinary incidents, report card grades, attendance and family demographics.

Dependent Variables

Behavioral adjustment. Both schools kept daily written records and referral notices on all disciplinary actions given to students, including classroom removals and school suspensions. These school records were used as a data source. Removal from a classroom or suspension from school is an ecologically valid, direct and meaningful measure of inappropriate school behavior. Removal hurts students in terms of reduced opportunity to learn and it diverts supervisory resources away from academic and other positive reinforcement activities. Probability of being removed from a class for disciplinary reasons varies as a function of classroom attendance. Therefore, groups were compared on rate-of-removal. Rate-of-removal for each student was calculated by dividing the student's number of classroom removals by the student's total class periods in attendance.

Allocation of resources is a critical concern for provision of educational services because resources such as staff time are always finite within a school setting and consequently, the degree to which student behavior captures teacher and administrative effort directly reduces staff's effort potential available for academic and other educational activities. Prior experience with secondary school procedures showed that when students are removed from a class for disciplinary reasons, approximately 75% of the time they are also assigned an additional disposition such as after-school-detention, counseling, parent conference or some other disposition. These additional dispositions could result in a tripling of school staff disciplinary contacts for classroom removal incidents. Therefore, classroom removal was defined as a direct measure of impact of unacceptable student behavior on school resources in terms of utilization of staff effort and time for discipline control. Total staff disciplinary contacts for each group were derived by the following formula: total group (classroom removals x 2 staff involved) + (suspensions x 3 staff involved) + (detentions after school x 2 staff involved) + (counseling x 2 staff involved) + (parent conferencing x 3 staff involved) + (other).

Report card grades. Both HstR and AR students were enrolled in English, health, history, math and two non-academic elective classes. School report card grades were distributed to students at 20-week grading intervals. Groups were compared on grade point average of academic achievement, workhabit and cooperative behavior performance. Workhabit grades reflected evaluations of such behaviors as bringing materials, paying attention, arriving on time, completing assignments and so forth. Cooperation grades reflected evaluations of such behaviors as compliance, getting along with peers, social skill, attitude toward authority and so forth. Because non-academic "electives" varied between students, only academic class report card grades were analyzed. Groups were also compared on frequency of specific grades earned.

School attendance. Attendance data showed that many students had a pattern of "selective truancy" during the school day as well as whole school day absences. Consequently, it was necessary to

measure each student's school attendance according to number of individual class periods absent during each twenty week period. Selective truancy was measured by calculating the variance between a student's six classes in terms of periods absent during each 20-week period. Thus, the standard deviation of reported absences across a student's six classes was used as a measure of the student's "cutting" or self-selected truancy from specific classes during a school day (a student was not marked absent when removed from class for programmatic, administrative or disciplinary reasons). A "low" standard deviation indicated the student was absent from six classes about equally; whereas a "high" standard deviation indicated a student was absent from some classes more than others, i.e., selective truancy.

Teacher ratings. Students were rated by their six teachers using a 20-item "teachable pupil" survey (Kornblau, 1982) converted to a likert-type rating scale. Items on this rating scale were systematically derived by Kornblau to reflect teacher's perceptions of attributes which characterize teachable pupils in terms of personal-social behaviors, task-related behaviors and intellectual behaviors.

Assessing a student's behavior with one teacher rating at a given time period in one school context (the usual method when using teacher ratings) poses the possibility that the rating reflects the teacher's perception more than the student's behavior. Thus, in the present study, to increase the validity and reliability of the teacher ratings, each student was independently rated by all of his/her six teachers and the student's assigned score for each item on the scale was an aggregate the of six teacher's ratings of the student's behavior in six classroom contexts. The AR and HstR students had the same teachers but at different times during the day (due to "tracking" or "homogeneous" grouping) and both groups had different teachers during two years at each of the four 20-week intervals.

Family demographics. Students were individually interviewed at the end of eighth grade using the Family Environment Scale (Moos & Moos, 1986). This scale measures family characteristics, as perceived by the child member, of cohesion, expressiveness, conflict, independence, achievement orientation, intellectual/cultural

orientation, active/recreational orientation, moral/religious emphasis, organization and control.

Factors such as low family income, stressful home conditions, absence of father from the home, non-English language spoken in the home, older siblings' school dropouts, conditions at home for studying, and whether parents work outside the home have been cited among other factors in the literature as related to a student's performance in school (e.g., Edmonds School District, 1983; National Center for Research in Vocational Education, 1983; Oregon Department of Education, 1980; Wisconsin Vocational Studies Center, 1981). Consequently, at the end of eighth grade, HstR and AR students were individually interviewed to assess specific family and family life characteristics.

Results

Behavioral Adjustment

Classroom disciplinary removal. Table 2 shows the number of incidents and proportion of students within each group who for disciplinary reasons were removed from a classroom. It is important to note the change in sample size for each group during the two year time period.

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Insert Table 2 about here

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Approximately seventy-five percent of the HstR students and fifty percent of the AR students were removed from at least one class during the seventh and eighth grade school year. Although the HstR group was comprised of substantially fewer students than the AR group, the HstR group had 48% more incidents of classroom removal than the AR group during the seventh grade and eighth grades. Groups were not compared on suspension data because there were too few incidents. Groups were compared on rate-of-classroom removal. The HstR rate-of-removal from class at each 20-week interval over the two year period was approximately four times greater than the AR rate-of-removal. The HstR group had a

statistically significant greater rate-of-removal than AR students at the seventh grade 20-week **t(51) = 2.56, p < .02**, seventh grade 40-week **t(46) = 3.31, p < .005**, eighth grade 20-week **t(37) = 2.22, p < .04,** and eighth grade 40-week **t(38) = 2.12, p < .05** (see Table 3). Table 4 shows the number of classroom removal incidents for each group according to the reasons cited by teachers stated on removal notices.

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Insert Table 3 and 4 about here

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Utilization of school resources. Table 2 shows number of incidents and proportion of students removed from class, suspended, detained after school, counseled, or parent conferenced. As previously explained, each of these disciplinary incidents represent two or three staff contacts. The HstR students had a notable and practically important greater impact on staff time/effort for disciplinary reasons than did the AR students. The HstR students had a total of 1,054 total school staff disciplinary contacts during seventh and eighth grade whereas the AR group, with fewer students, generated half as many staff disciplinary contacts with a total of 506 during two years.

Report Card Grades

Academic grades. The HstR and AR academic grade point averages four academic classes during seventh and eighth grade are listed on Table 5. As expected, the HstR group had statistically significant lower grade averages in academic grades at the seventh grade 20-week, **t(51) = 2.68, p < .01** and 40-week, **t(45) = 3.50, p < .001** and at the eighth grade 20-week, **t(38) = 3.07, p < .005** and 40-week, **t(37) = 2.58, p < .02** controlling for Type I error by setting alpha at .05 divided by two t-tests for each school year.

Comparing A-B-C grades versus D-F grades, the HstR students received fewer A, B, and C grades and more D and F grades than AR students, a chi-square test, was statistically significant at the seventh grade 20-week X^2 **= (1, N = 207) = 6.23, p < .025** and 40-week X^2 **= (1, N = 188) = 20.58, p < .001**, and at the eighth grade 20-

week X^2 = (1, N = 158) = 1635, p < .001, and 40-week X^2 = (1, N = 152) = 16.31, p < .001 .

Workhabit grades. Differences between the two groups were statistically significant in workhabit grades at the seventh grade 40-week, t(45) = 3.50, p < .001 and at the eighth grade 20-week, t(42) = 2.63, p < .02 and 40-week, t(41) = 2.57, p < .02 (see Table 5) controlling for Type I error by setting alpha at .05 divided by two.

Comparing HstR and AR group frequencies of excellent versus unsatisfactory evaluations in workhabit grades found statistically significant differences at the seventh grade 20-week, X^2 = (1, N = 137) = 5.60, p < .025 and 40-week X^2 = (1, N = 123) = 17.03, p < .001, and at the eighth grade 20-week, X^2 = (1, N = 100) = 8.25, p < .005 and 40-week X^2 = (1, N = 103) = 7.73, p < .01.

Cooperation grades. The HstR group had statistically significant lower grade averages in cooperation grades only at the seventh grade 20-week, t(51) = 2.47, p < .02. Controlling for Type I error by setting alpha at .05 divided by two.(see Table 5).

Comparing HstR and AR group frequencies of excellent versus unsatisfactory grades in cooperation report card grades was statistically significant at the seventh grade 20-week, X^2 = (1, N = 128) = 13.09, p < .001 and 40-week X^2 = (1, N = 95) = 9.75, p < .005 with the AR group having more excellent and fewer unsatisfactory grades than the HstR group.

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Insert Table 5 about here

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School Attendance

Groups were compared on school attendance. The AR group had fewer class absences, however the difference between groups was not statistically significant. Finding no statistical difference may have been influenced by the large within group variances. To test that hypothesis, student "outliers" whose absences were more than two standard deviations above their group average were excluded from analysis. No statistical differences in group absences were

found when the group variance was reduced by removing these "outlier" students from the analysis. Table 6 lists the means and standard deviations of class periods absent.

Groups were compared on selective truancy rate (the standard deviation of absences over six classes) during two years. At every time period the AR group exhibited less selective truancy. In the seventh grade, the AR group had a lower rate of selective truancy that approached statistical significance ($p < .09$). Again, there were very large within group variances which may have contributed to the lack of statistically significant difference. When "outlier" students with a truancy rate two or more standard deviations above their group rate were excluded from analysis, the seventh grade 20-week approached statistical significance, $t(47) = 1.80$, $p < .08$ and the group difference at 40-week was statistically significant, $t(43) = 2.48$, $p < .02$. In the eighth grade, differences between the two groups at the 20-week period approached statistical significance ($p < .06$) and at the 40-week the difference was statistically significant, $t(38) = 2.56$, $p < .03$. Again, when "outliers" of two standard deviations or more were excluded, the differences were statistically significant at both periods in the eighth grade, $t(36) = 2.56$, $p < .02$ and $t(36) = 2.00$, $p < .05$ (see Table 6).

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Insert Table 6 about here

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Teacher ratings. The average rating of six teachers on each item of the 20-item teachable pupil scale was calculated. An examination of these data indicated a positively skewed distribution (lower ratings) of HstR teacher ratings and a negatively skewed (higher ratings) distribution of AR teacher ratings on nearly every item. Consequently, the median was selected as the most appropriate comparison statistic. The 20 items had been previously factored by Kornblau (1982) into task-related, personal-social and intellectual behaviors. Table 7 lists the median ratings for each group on each item of each factor for the seventh and eighth grades.

Type I error was controlled by setting alpha at .05 divided by 20 (the number of t-tests).

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Insert Table 7 about here

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Family Demographics

Family environment scale. There were no statistically significant differences between the HstR and AR groups on any of the Family Environment Scale factors.

Family characteristics interview. Table 8 describes group responses to questions from this interview. These data have not been statistically analyzed. Similarities between the groups appear striking.

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Insert Table 8 about here

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Regression Analyses

Table 9 lists the R^2 and associated p values when using the 5-item teacher rating and CTBS academic scores from the first semester of sixth grade as predictors of eighth grade school performance two and one half years later. (Rate of referral on Table 9 is rate of classroom removal). Two approaches to regression analysis were used. First, all five-items on the teacher rating were placed in the regression equation and the R^2 and associated p value of the F-statistic were determined. This analysis provided information on the "usefulness" of the 5-item scale as a whole for accounting for variance in eighth grade school performance. A regression modeling approach was also used. To eliminate redundancy among the 5-items, a stepwise regression procedure was employed with alpha to enter and remove set at .15. This procedure provided the R^2 for an item(s) accounting for the greatest amount of variance in eighth grade performance. Then, a final re-modeling analysis was performed which tested the model derived from the stepwise results

and provided R^2 and associated p value. The same procedures of regression analysis were used for the CTBS data.

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Insert Table 9 about here

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Discussion

Characteristics of Highest-Risk and At-Risk Students Prior to Junior High School

From a sample of 351 at-risk students, a surprisingly large proportion of the students in each classroom, approximately 25%, were targeted as at substantially greater risk for secondary school failure. Indeed, in terms of regular sixth grade teacher perceptions of a student's need for supervision, motivation, social interaction skill, academic potential and teachability, students in the highest-risk group were on average one standard deviation below their classroom mean on 4.5 of these characteristics. At-risk students were, on average, rated less than one of these characteristics below their classroom mean. Scatter plots on a classroom-by-classroom basis of the 5-item teacher ratings clearly showed that scores were not normally distributed. Students, with few exceptions, fell into one of two groups...HstR or AR.

Distribution of race was similar for both HstR and AR groups. However, it is interesting to note that non-English speaking students made up 25% of the HstR group and only 2% of the AR group, even though academic potential (which can be directly linked to non-English language usage) was only one of the characteristics on the 5-item scale used to differentiate the HstR and AR groups.

Consistent with other data on low-achieving and special education students, a greater proportion of male students (60%) than female students (39%) were in the HstR group. For purposes of the

study, to control for sex differences, the AR junior high sample group was stratified to match the HstR on sex distribution.

Academic achievement was another variable which differentiated HstR students from their AR peers, although both groups were characterized by high variance on the CTBS academic achievement scores. The AR students as a group were achieving below national norms; however, the HstR students as a group were exceedingly poor academic achievers functioning at about the 17th national percentile rank in every academic area. Although there was great variance in achievement levels, only 2 of the 58 HstR students were at or above the AR mean percentile rank in at least three academic areas and only 3 of the 268 AR students were at or below the HstR mean percentile rank in at least three academic subjects.

Highest-Risk and At-Risk Junior High School Adjustment

Disciplinary incidents. In terms of junior high school adjustment, the HstR students were clearly different from their AR peers in behavior deemed unacceptable or intolerable within a junior high school setting. It appears that the HstR students can be distinguished from the AR students on intensity of unacceptable behavior as evidenced by the suspension data as well as on chronicity of unacceptable behavior as evidenced by rate-of-removal from the classroom.

The HstR group generated more than twice as many classroom removals and suspensions as the AR group despite the fact that the AR group had approximately 18% fewer students in the seventh grade and almost 40% fewer students in the eighth grade. Indeed, according to rate-of-removal data, HstR students were more than three times as likely as AR students to be supervised for disciplinary purposes (as opposed to being supervised for classroom instructional purposes).

Removing HstR students from class appears to have been a persistent but ineffective strategy for modifying student behavior. If classroom removal had actually changed HstR behavior one would expect a decrease in removal rate over time. Not only did HstR

students' rate-of-removal not decrease during their first year in junior high school but there was actually a significant increase in their rate-of-removal over time, paired t (21) = 2.8, $p < .01$. The AR rate-of-removal remained the same or slightly decreased during seventh grade.

Moreover, data reported in Table 3 suggest that HstR students' rate-of-removal improved during eighth grade (returning to the same level as their 20-week seventh grade removal rate). However, because many HstR students had left the target schools by the start of eighth grade, the "improvement" or leveling off of removal rate in the eighth grade actually reflects the fact that HstR students with highest removal rates were no longer attending the school as can been seen when contrasting HstR "leavers" ($n = 7$) seventh grade rate-of-removal with the removal rate of HstR "stayers" who remained at the junior high school throughout seventh and eighth grade ($n = 17$). Although a statistical test between the two group means is not appropriate because the leavers sample is so small and the difference in sample size between the leavers and stayers is so great, when graphed, a visual inspection of the data shows that HstR stayers (20-week, M = .007, SD = .009; 40-week, M = .013, SD = .015) had a lower rate-of-removal than HstR leavers (20-week, M = .012, SD = .013; 40-week, M = .018, SD = .015). The slope of the removal rate from seventh grade 20-week to 40-week is also flatter for the HstR stayers than for HstR leavers. Apparently, HstR students with the highest classroom removal rates are less likely than other HstR students to return in the eighth grade to the junior high school they attended in the seventh grade and that group "improvements" from seventh to eighth grade in classroom removal rates for HstR students is due to the fact that the HstR students with the highest rates have left the school.

Table 4 provides insights into why HstR and AR students are removed from classrooms. Not surprisingly, disruptive or uncooperative behavior was the primary reason teachers gave for referring a student out of their classroom. Table 4 also illustrates another important and disturbing finding regarding disciplinary incidents. Apparently HstR students were removed from class or

"not allowed in" because of tardiness or because of prior non-attendance. Indeed, 11% of HstR students seventh grade and 12% of their eighth grade classroom removals, compared to 10% and 5% for the AR group, were for unacceptable attendance. These data appear to demonstrate an ultimate irony to educators concerned with school dropout of at-risk students. That is, when an HstR student actually showed up to class and did not remove him or herself with truancy or disruptive behavior, the student still stood a chance of non-attendance because the teacher may have removed the student for tardiness or prior non-attendance.

In summarizing the data on disciplinary incidents, it is not surprising that teachers in these schools were extremely disturbed by what they perceived as unacceptable classroom behavior. Behaviors which are perceived to disrupt the order and routine of a classroom or which are overtly disobedient have historically been interpreted by teachers, at all levels, as serious threats to learning and teaching (e.g., Baer, Goodall & Brown, 1983; Stouffer & Owen, 1953; Wickman, 1938). Substantial evidence indicates that teachers and administrators perceive student misbehavior and/or personal-social difficulties as extremely problematic. For example, approximately 75% of the teachers and principals from 44 middle and junior high schools, ranked "lack of interest/apathy" as their first concern and "rude/defiant behavior" as their second concern (Huber, 1984). Bruner and Felder (1983) surveyed 164 secondary school teachers from a large school district. Teachers were asked to rate 60 items such as facilities, resources, personnel needs and student characteristics according to the degree they believed each variable contributed to the difficulty of a teaching setting. The highest and second highest ranked items were "lack of support from building administration concerning student discipline" and "teaching a large percentage of students whose behavior is hostile and disruptive." Moreover, these two items were the only items that scored a mean rating above 8 on a 9 point scale.

That task and social behavior is an important variable for school success is consistently supported in other research. Classroom behavior has been found to be an index of a student's school performance. Although a causal relationship between behavior and achievement has not been clearly demonstrated, several correlational studies have found that behaviors such

as impatience, disturbing the class, anxiousness, defiance, lack of task persistence and not following directions are significantly negatively correlated with achievement and report card grades. For example, Swift and Spivack (1969) found 12 interpersonal and task-related behaviors to be significantly related to junior and senior high achievement in both normal and emotionally disturbed adolescents equated on IQ. Cobb (1969) found specific classroom behaviors to be predictive of arithmetic achievement across different schools and also highly correlated with achievement in reading and spelling. McKinney, Mason, Perkerson and Clifford (1975) found that social behaviors observed at the beginning of the school year were predictive of academic achievement at the end of the year.

Although teachers as a group are very concerned with disruptive behavior, it is extremely troubling that a large proportion of the most academically needy students -- HstR -- had substantially reduced academic learning time due to classroom removal for unacceptable behavior. Data strongly suggest that dropout prevention efforts with highest-risk students must specifically attempt to enhance both task-related and interpersonal/social behavior so that the students are not perceived as "disrupters" to class procedures. Other research (Larson, in press) demonstrates that highest-risk students can directly benefit from training which provides them with self-control and problem solving skills. It is also apparent that secondary teachers of highest-risk students must be trained to effectively manage inappropriate classroom behavior within the classroom setting.

Utilization of School Resources. Data show that classroom and school removal as a behavior management strategy for difficult-to-teach students had a significant impact on school resources because such a policy greatly increased the number of certified school staff involved in a disciplinary incident. For example, for schools in this study, removing a student from a class involved at least two staff - the classroom teacher and the staff person supervising the student who was removed. Frequently the action also involved a third staff who counseled or supervised the student after school or during lunch detention. Occasionally a school administrator was also involved in the action.

Indeed, because of increased requirements for supervision, counseling, etc., as perceived by teachers, the HstR students generated 1,054 incidents of school staff disciplinary contacts during the seventh and eighth grades. Recalling that our original sampling of sixth graders found that 25% of the sixth grade students were identified as highest-risk, we begin to see the potentially profound impact on school resources resulting from classroom removal incidents for HstR students. That is, each junior high school had a student population of approximately 2,000 students of which 500 can be estimated to be highest-risk as defined in this study. Inferring from the HstR student data, we can predict that if these 500 highest-risk students attended school at the same rate as the HstR students then they would have generated for each school approximately 26,350 staff disciplinary contacts during the seventh and eighth grades.

These numbers suggest a possible explanation for increased special education referral and/or school "pushout" of under-achieving difficult-to-manage students (i.e., HstR students). Perception by school staff of needing to allocate an inordinate amount of staff time to manage a small proportion of students may encourage schools to "disown" difficult-to-manage under-achievers and, thereby, increase special education referrals and/or school "pushouts".

In terms of dropout intervention programs, suggestions that school site staff engage in or support dropout recovery efforts must address the reality of asking school staff to actively find and return to their classrooms students they perceive as highly disruptive to classroom proceedings. Unless schools are provided with additional resources and training needed to effectively teach students who are achieving far below grade level and who are difficult to manage, it is unrealistic to assume that schools can be motivated to increase efforts to find and woo back to class highest-risk students.

Report card grades. It is not surprising that AR students received significantly better report card grades than HstR students in academic as well as workhabit and cooperation behavior. It is troubling to note that HstR students showed a systematic worsening in academic grades during the seventh grade from 20-week to 40-week, $X^2 = (1, N = 60) = 4.5, p < .05$) (Within group eighth grade data have not been analyzed).

One unexpected and potentially important finding comes from the comparison of workhabit versus cooperation grades. In both AR and HstR groups, more students received more unsatisfactory evaluations in workhabit behavior than in cooperation behavior. According to report card data and teacher ratings, (see Tables 5 and 7) students in this study had greater difficulty in generating appropriate workhabit behavior such as bringing supplies, attending to class activities, getting started on work, completing work, following directions, being quiet and so forth, than they did generating cooperative behaviors such as getting along with peers, expressing emotions appropriately, and displaying appropriate social behavior. Ineffective workhabit skills reduce academic learning time and/or time-on-task for AR and HstR students. That is, extremely problematic in a group of students whose academic learning time is already decreased because of high absence, truancy and disciplinary removal.

That workhabit behavior was found to be more problematic than cooperative behavior for high-risk students was surprising, given that other studies have identified lack of cooperative behavior to be the primary concern of teachers (e.g., Bruner & Felder, 1983; Huber, 1984). Data from this study can possibly be explained by other studies comparing elementary and junior high classroom task organization and its impact on students with exceptionally poor academic skills. For example, Ward, Mergendoller & Tikunoff (1982) and others have found that, in junior high classrooms, whole group instruction is the norm and informal cooperation and collaboration among students is discouraged. Apparently, as students transition to secondary school they are expected to independently organize and complete teacher assigned tasks. Such expectations appear to be extremely problematic and even unrealistic for seriously under-achieving students because increases in whole group instruction and decreases in opportunities for cooperative interaction require that each student be competent in producing a wide variety of workhabit and academic behavior skills. Indeed, responding effectively independently to secondary classroom expectations seemed to be beyond the ability of most of the highest-risk students in this study. It would appear that dropout prevention efforts for HstR students would do well to include training

secondary teachers to manage instruction for students who do have exceptionally poor workhabit, self-control and academic skills and who are late to class and frequently absent.

It is of paramount importance for long term outcomes, whether as a result of experience or instructional efforts within the junior high school classroom, HstR students increased their proficiency in producing effective workhabit behaviors. Although additional analysis needs to be completed for the AR group and for the eighth grade, to compare HstR group workhabit changes from seventh grade 20-week to 40-week workhabit grades, the Bowker extension of the McNemar test of symmetry for correlated proportions (Marascuilo & McSweeney, 1977) was used. (A repeated measure analysis of variance or analysis of covariance was not utilized because it would have compared differences in grade point average, a variable lacking ecological validity for low-achievers and because of high variance within groups). The Bowker procedure tested the hypothesis that among those grades that changed from 20-week to 40-week, the probability of change to more favorable grades equaled the probability of change to less favorable grades. In this way it was possible to determine if there was a statistically significant directional improvement in HstR workhabit grades from 20-week to 40-week. Data showed that, unfortunately, as time went on HstR workhabit behavior actually worsened. That is, the HstR students showed a systematic tendency to receive less favorable workhabit grades from the 20-week to the 40-week report period, $X^2 = (3, N = 56) = 8.84, p < .05$. Additionally, the proportion of students receiving unsatisfactory workhabit grades, 50% of the HstR students and 30% of the AR students, remained steady for both groups throughout the two years of junior high school.

School attendance. Although high within group variance was the norm for both groups, over two years the average percent of classes absent from each of four 20-week periods was 12%, 29%, 26% and 23% for the HstR students and 16%, 21%, 21% and 24% for AR students. Contrary to expectation, the HstR students as a group were not clearly absent more often than their more academically successful AR peers. Indeed, this is a sad commentary on AR attendance.

One important and potentially hopeful finding is that HstR students began junior high school with much better attendance than they evidenced at the end of seventh and during the eighth grade. Only after the first 20 weeks of junior high school, did HstR students double their absence rate to the 25% range. Similarly, HstR selective truancy rates were considerably lower during the first 20 weeks of junior high school (rate = 1.66) and essentially tripled after that period (rates = 6.93, 2.73, 4.89). The critical message in these data is that once absences and truancy are allowed to double and triple, HstR students appear never to "recover" during the following semesters. The HstR students in this study never repeated the better attendance they exhibited at the outset of junior high school. These data clearly indicate that secondary schools dropout prevention efforts for HstR students must focus on attendance from the first day of junior high school and not wait until poor attenders emerge toward the end of the first year. Further research must determine why HstR students' attendance deteriorated so markedly after the first 20 weeks of school. Did the schools fail to monitor absences and selective truancy and thus give students the impression that their attendance would go unnoticed? Did HstR students become so discouraged with their academic and behavior adjustment problems that after the first 20 weeks they felt that coming to school was not helping their grades or learning? Did a "pushout" process begin as HstR students generated more and more classroom referrals and were welcomed less and less by the implicit or perhaps explicit messages of school staff?

Another important finding was that HstR stayers (n = 17) and leavers (n = 7) had almost identical seventh grade absence and selective truancy rates. In other words, the HstR students who left the school after the eighth grade were not distinguished by poorer attendance compared to HstR students who stayed. It is interesting to note that the HstR leavers (who transferred to seven different schools), in their new schools as eighth graders had the same eighth grade absence and truancy rate as the HstR stayers.

Teacher ratings. At the beginning of seventh grade, HstR students were rated by teachers as significantly below their AR peer

in task-related skills, personal skills and intellectual skills. However, by the end of eighth grade, statistically significant differences between the two groups remained only in the task-related and intellectual skills. These data support the report card data which showed that academic and workhabit evaluations as opposed to cooperative behavior evaluations most distinguished the HstR and AR groups.

Family characteristics. Many educators and society at large frequently characterize the family as the most critical element in a child's school adjustment. Data in this study, as evidenced by no group differences on the Moos Family Environment Scale and the family characteristics described in Table 8, do not suggest the notion that "home life" is a critical factor distinguishing at-risk from highest-risk low-income minority students. This is not to say that these familial characteristics do not distinguish these students from middle class low-risk agemates. Indeed, more AR students reported that they came from divorced homes, homes with higher father unemployment, and less punishment and reward from parents for school performance. These are family characteristics found to be associated with school failure (California State Dept. of Education, 1986). Both groups reported that 25% of their fathers and 50% of their mothers did not speak English and that in terms of providing them with attention and help at home, 71% of their mothers and 80% to 100% of their fathers worked full time. A very high percentage of students in both groups reported that they had a quiet place at home to study and 100% of the students in both groups reported that they expected to graduate from high school. Data suggest HstR students live in homes with more people, both relatives and non-relatives. Taken as a whole, data from this study would suggest that dropout prevention efforts involving parents or attempting to restructure school-family relations, would not have to be qualitatively different for the AR and HstR students.

Predicting Eighth Grade Adjustment From Sixth Grade Teacher Ratings and Achievement Scores.

Several conclusions emerge from the multiple regression modeling. The 5-item teacher rating scale accounts for a statistically significant proportion of eighth grade variance for both groups in selective truancy, periods absent, report card grades, workhabit grades, and cooperation grades. Additionally, the 5-item scale accounts for 72% of the HstR classroom removal variance (listed as rate of referral on Table 9) but no significant proportion of the removal variance in AR students. These data, coupled with the fact that "troublesome" scores on the 5 item rating were not normally distributed but served to differentiate HstR from AR students, lends support to the potential usefulness of the rating scale for targeting students at greatest risk for failure when they transition to secondary school. Further research is needed.

When redundancy among the five items is eliminated, the AR and HstR students have qualitatively different significant predictor variables. For the AR students, "level of motivation" and "need for supervision" accounted for the greatest proportion of variance in attendance, truancy, grade point average and workhabit grades. Whereas for HstR students, contrary to what might be expected, "level of motivation" was <u>not</u> a predictive factor for any eighth grade school adjustment variable. "Social skills" and "teachability" accounted for the greatest proportion of the variance in HstR student's eighth grade performance. These data appear to have direct implications for dropout prevention efforts. At-risk students would seem to benefit from strategies and programs directly addressing their motivation and maturity (need for supervision) while highest-risk students would appear to benefit more from social skill training and efforts directly related to increasing their teachability (workhabit and academic behavior). That is, AR and HstR students may require qualitatively different kinds of school dropout prevention programs. Another important finding was that sixth grade CTBS achievement data in four academic areas was not significant for predicting school adjustment at the end of eighth grade for either the HstR or AR students. Moreover, these sixth grade academic achievement scores were not useful for predicting academic report card grades. Such a finding cannot be accounted for

by small variance in the CTBS data or the dependent variables. The most straight forward interpretation of this finding is that for at-risk and highest-risk students, academic achievement level is simply not as critical an influence on grade point average, attendance and discipline incidents as is the student's motivation, workhabits, social skills and social maturity. This is not to say, however, that academic achievement does not influence motivation and workhabit behavior. Nevertheless, it does suggest that academic remediation alone may not necessarily increase HstR and AR school success.

Lastly, specific items on the 5-item teacher rating scale administered two and one half years prior to the end of eighth grade were able to account for a whopping 50% to 75% of the variance when groups were analyzed separately in factors measuring school attendance; i.e., classroom removal, absences, truancy. For purposes of targeting "riskiness" of school dropout prior to secondary school, these data lend strong initial support to pursuing research efforts testing the efficacy of targeting HstR students on the 5 item characteristics.

REFERENCES

Baer, G. I., Goodall, R., & Brown, L. (1983). Discipline in the classroom: Perceptions of the middle grade teachers. The Clearing House, 57(3), 139-142.

Bruner, A. L., & Felder, B. D. (1983). Problems teachers encounter: How difficult is teaching? What is the principal's role? NAASP Bulletin, 67, 68-72.

Center for Research in Vocational Education (1983). Building basic skills: The dropout (Technical Report). Columbus, Ohio.

Cobb, J. A. (1969). Survival skills and first-grade academic achievement (Report No. 1, University of Oregon, Contract No. NPECE-70-005, OEC 0-70-4152 (607), Bureau of Emotionally Handicapped, U.S. Office of Education). Eugene, OR: Research Institute.

Edmonds School District (1983). School dropouts. A study and final report (Technical Report). Washington.

Ekstrom, R., Goertz, M., Pollack, J., & Rock, D. (1986). "Who Drops Out of High School and Why? Findings from National Study." Teachers College Record, 87, 356-373.

Gerber, M. M., & Semmel, M. I. (1984). Teacher as imperfect test: Reconceptualizing the referral process. Educational Psychologist, 19(3), 137-147.

Gerber, M. M., & Semmel, M. I. (1985). Micro-economics of referral and reintegration: A paradigm for evaluation of special education. Studies in Educational Evaluation, 11, 13-29.

Good, T. L., & Brophy, J. E. (1986). School effects. In M. C. Wittrock (Ed.), Handbook of Research on Teaching (pp. 570-602). New York, NY: Macmillan Publishing Co.

Huber, J. D. (1984). Discipline in the middle school--parent, teacher and principal concerns. NAASP Bulletin, 6(2), 74-79.

Larson, K. A. (1985). The efficacy of social meta-cognitive training for social adjustment of LD and non-LD delinquents. Dissertation Abstracts International, 46/04, 948A.

Irvine, J. J. (1985). Teacher communication patterns as related to the sex and race of the student. Journal of Educational Research, 78, 338-345.

Kornblau, B. (1982). The teachable pupil survey: A technique for assessing teachers' perceptions of pupil attributes. Psychology in the Schools, 19, 170-174.

McKinney, J. D., Mason, J., Perkerson, K., & Clifford, M. (1975). Relationship between classroom behavior and academic achievement. Journal of Educational Psychology, 67, 198-203.

Moos, R. H., & Moos, B. S. (1986). Family environment scale manual (2nd ed). Palo Alto, CA: Consulting Psychologists Press, Inc.

Oregon Department of Education (1980). Oregon early school leavers study (Technical Report). Salem, Oregon.

Pullis, M., & Cadwell, J. (1982). The influence of children's temperament characteristics on teacher's decision strategies. Am. Ed. Research Journal, 19(2), 165-181.

Rumberger, R. W. (1986). High-school dropouts: A problem for research, policy and practice. In J. Block's (Ed.) California Public School Forum (Vol. 1) (pp. 1-19). Berkeley, CA: Regents of the University of California.

Shavelson, R., Cadwell, J. & Izu, T. (1977). Teachers sensitivity to the reliability of information in making pedogical decisions. Am. Ed. Research Journal, 14, 83-97.

Stouffer, G. A., & Owen, J. (1953). Behavior problems of children identified by today's teachers and compared with those reported by E. C. Wickman. Journal of Educational Research, 48, 321-331.

Vocational Studies Center (1981). Staying in. A dropout prevention handbook K-12 (Technical Report). University of Wisconsin-Madison.

Wickman, E. C. (1938). Teachers and behavior problems. New York: The Commonwealth Fund, pp. 1-40.

Table 1

Five Item Teacher Ratings of Low Risk and High Risk Samples

Teacher Rating[a]	At-Risk Jr. High (n = 24)	Highest-Risk Jr. High (n = 29)
1. Need for Supervision		
$\bar{X}$	2.04	5.33**
SD	(1.00)	(1.41)
2. Motivation		
$\bar{X}$	2.71	4.96**
SD	(1.12)	(1.48)
3. Social Interaction Skill		
$\bar{X}$	3.71	5.37**
SD	(1.37)	(1.62)
4. Academic Potential		
$\bar{X}$	3.50	5.63**
SD	(1.50)	(1.47)
5. Teachability		
$\bar{X}$	2.54	5.33**
SD	(1.06)	(1.47)

CTBS[b]	6th Grade At-Risk	Highest-Risk
Reading % ile	n = 27	n = 22
$\bar{X}$	35.41**	16.82
SD	(19.68)	(17.07)
Math % ile	n = 27	n = 23
$\bar{X}$	54.48**	23.22
SD	(21.45)	(22.36)
Spelling % ile	n = 22	n = 22
$\bar{X}$	47.36**	22.09
SD	(23.09)	(23.13)
Language % ile	n = 22	n = 21
$\bar{X}$	44.91**	17.24
SD	(21.13)	(18.16)

Table 1 Cont'd

	Junior High At-Risk	Junior High Highest-Risk
SEX	n = 24	n = 29
Male	66.00%	62.07%
Female	33.33%	37.93%
RACE	n = 24	n = 29
White	0.00%	0.00%
Hispanic	75.00%	82.76%
Black	25.00%	17.24%
Other	0.00%	0.00%
AGE	n = 24	n = 29
$\bar{X}$	11.47	12.01
SD	(.61)	(.49)

[a]Teacher rating on 5-item scale

[b]Comprehensive test of basic-skills (national norms)

**$p < .001$ between groups

Table 2

Number of Incidents per Group and Proportion of Students in Each Group Receiving Disciplinary Dispositions for Inappropriate School Behavior

	Highest-Risk		At-Risk	
	7th	8th	7th	8th
Removed from Class				
20 Week	94 (.67)	80 (.75)	37 (.45)	59 (.54)
40 Week	113 (.64)	51 (.73)	32 (.54)	34 (.46)
Total	207 (.74)	131 (.74)	69 (.49)	93 (.50)
Suspended From School				
20 Week	13 (.25)	1 (.06)	7 (.14)	2 (.08)
40 Week	15 (.36)	5 (.27)	4 (.12)	3 (.13)
Total	28 (.39)	6 (.16)	11 (.13)	5 (.10)
Detained After School				
20 Week	34 (.38)	9 (.13)	9 (.24)	9 (.25)
40 Week	24 (.45)	5 (.27)	4 (.12)	3 (.13)
Total	58 (.57)	14 (.19)	13 (.18)	12 (.18)
Counseled				
20 Week	23 (.50)	32 (.38)	4 (.10)	27 (.33)
40 Week	16 (.45)	21 (.40)	8 (.27)	11 (.17)
Total	39 (.65)	53 (.39)	12 (.18)	38 (.25)
Parent Conference				
20 Week	17 (.54)	22 (.56)	8 (.21)	20 (.38)
40 Week	24 (.45)	18 (.53)	9 (.27)	15 (.33)
Total	41 (.65)	40 (.55)	17 (.24)	35 (.35)
Other Disposition				
20 Week	4 (.17)	5 (.13)	3 (.10)	0 (.00)
40 Week	6 (.18)	5 (.27)	3 (.08)	1 (.04)
Total	10 (.35)	10 (.19)	6 (.09)	1 (.02)

At 7th/20 weeks, n=24 high risk, n=29 low risk
At 7th/40 weeks, n=22 high risk, n=26 low risk
At 8th/20 weeks, n=16 high risk, n=24 low risk
At 8th/40 weeks, n=15 high risk, n=24 low risk

Table 3

Group Rate-of-Removal from Class for Disciplinary Reasons

	Rate-of-Removal [a]			
	n	M	SD	t
Seventh Grade				
Weeks 1-20				
HstR	24	.008	.010	2.56*
AR	29	.003	.005	
Weeks 21-40				
HstR	22	.013	.015	3.31**
AR	26	.003	.003	
Eighth Grade				
Weeks 1-20				
HstR	17	.013	.016	2.22*
AR	22	.004	.006	
Weeks 21-40				
HstR	16	.008	.010	2.12*
AR	24	.003	.004	

*p < .05

**p < .01

[a] Number of times removed from class divided by class periods attended

Table 4 **Number of Classroom Removal Incidents According to Reasons Described by Teachers on Referral Notices**

At-Risk

	7th		8th	
	20wk	40wk	20wk	40wk
Disruptive	13	8	28	13
Tardies	1	2	1	4
No-dress for P.E.	2	1	2	0
No materials	1	1	3	2
Prior non-attendance/truancy	0	3	1	0
Won't do work	1	1	2	1
Destruction of property	0	1	1	3
Fighting	1	1	2	1
Talking	2	5	10	4
Uncooperative	4	4	6	4
Theft	0	0	0	1
Swearing	1	1	2	0
Littering	0	0	0	1
Cheating	0	1	0	0
Jumping fence	0	2	0	0
No-show detention	1	1	6	2
disrespectful/defiant	3	0	6	3

Highest-Risk

	7th		8th	
	20wk	40wk	20wk	40wk
Disruptive	42	35	43	15
Tardies	8	7	4	4
No-dress for P.E.	1	5	2	1
No materials	6	5	5	3
Prior non-attendance/truancy	5	5	5	4
Won't do work	10	6	5	5
Destruction of property	0	1	0	0
Fighting	3	2	2	1
Talking	5	10	4	4
Uncooperative	13	15	15	5
Theft	0	1	1	0
Swearing	1	0	1	3
Threaten Student/Teacher	0	0	2	1
"Flipping Off" Teacher	0	0	0	1
Eating in class	1	1	0	1
Littering	0	1	0	0
Hiding from Teacher	0	0	1	0
Exposing body to class	0	0	0	1
No-show detention	5	7	1	1
Jumping fence	1	0	0	0
Disrespectful/defiant	13	12	4	2
Cheating	1	0	0	0

Table 5

Group Comparison of Report Card Grades for Achievement, Work Habits, and Cooperation

	7th Grade				8th Grade			
	20 wk		40 wk		20 wk		40 wk	
Achievement[a]	M	SD	M	SD	M	SD	M	SD
HstR	1.46**	(.76)	1.28**	(.80)	1.31**	(.93)	1.61*	(.93)
AR	2.03	(.80)	2.08	(.77)	2.13	(.76)	2.32	(.77)
Work Habits[a]								
HstR	.71	(.60)	.58**	(.52)	.63*	(.68)	.72	(.66)
AR	1.01	(.62)	1.06	(.63)	1.01	(.54)	1.12	(.61)
Cooperation[a]								
HstR	.90*	(.66)	.94	(.60)	1.08	(.58)	1.11	(.54)
AR	1.30	(.52)	1.23	(.44)	1.25	(.48)	1.29	(.45)

*$p < .05$ between groups

**$p < .01$ between groups

[a] Grade point average of achievement, work habits, and cooperation for four academic classes

Note: At 7th grade 20 weeks, HstR $n = 24$, AR $n = 29$. At seventh grade 40 weeks, HstR $n = 21$ and AR $n = 26$.

At 8th grade 20 weeks, HstR $n = 16$, AR $n = 24$. At eighth grade 40 weeks, HstR $n = 15$ and AR $n = 24$.

Table 6
Group Comparison on Attendance

	Periods Absent			
	n	M	SD	t
Seventh Grade				
Weeks 1-20				
HstR	24	33.25	47.87	
				n s
AR	29	43.07	44.89	
Weeks 21-40				
HstR	23	79.13	63.40	
				n s
AR	26	58.31	60.73	
Eighth Grade				
Weeks 1-20				
HstR	17	68.65	56.28	
				n s
AR	22	56.09	75.40	
Weeks 21-40				
HstR	16	63.31	52.83	
				n s
AR	24	66.13	74.95	

	Selective Truancy [a]				Outliers Excluded [b]			
	n	M	SD	t	n	M	SD	t
Seventh Grade								
Weeks 1-20								
HstR	24	1.66	1.51		22	1.36	1.17	
				n s				n s
AR	29	2.90	3.32		27	2.18	1.87	($p < .08$)
Weeks 21-40								
HstR	23	6.93	5.36		21	4.89	3.76	
				ns				2.48*
AR	26	3.86	4.31		24	2.75	1.82	
Eighth Grade								
Weeks 1-20								
HstR	17	2.73	1.98		17	2.73	1.98	
				n s				2.56*
AR	22	1.70	1.45	($p < .06$)	21	1.47	.99	
Weeks 21-40								
HstR	16	4.89	5.32		15	4.15	4.56	
				2.23*				2.00*
AR	24	2.31	1.72		23	2.11	1.47	

*$p < .05$

[a]Selective truancy is the standard deviation of six class period absences.
[b]Subjects above 2SD excluded from analysis.

Table 7

Medians of Six Teacher Ratings for Classroom Behavior

Item	7th Grade Highest-Risk 20 wk M (SD)	Highest-Risk 40 wk M (SD)	At-Risk 20 wk M (SD)	At-Risk 40 wk M (SD)
Task-Related Items				
follows directions	4.40 (2.05)	4.17 (2.08)	5.85 (1.58)	5.76 (1.56)
eager, enthusiastic	3.54 (1.93)*	3.66 (2.34)*	5.31 (1.69)	5.36 (1.53)
begins and completes tasks	3.75 (1.77)*	3.91 (2.09)*	5.85 (1.67)	5.66 (1.65)
attention span appropriate	3.65 (1.84)*	3.98 (1.84)*	5.79 (1.74)	5.68 (1.50)
willingly participates	4.13 (1.61)*	4.32 (2.33)*	6.04 (1.76)	5.86 (1.54)
academic achievement	3.06 (1.56)*	3.32 (1.51)*	5.40 (1.71)	5.48 (1.49)
completes work	3.69 (2.05)*	3.75 (2.32)	5.65 (1.78)	5.52 (1.78)
alert, attentive	3.90 (1.91)*	4.06 (2.12)	5.71 (1.67)	5.58 (1.68)
Personal-Social Items				
well accepted by peers	4.89 (1.45)*	4.86 (1.80)	6.15 (1.22)	5.92 (1.08)
socially adjusted	4.58 (1.54)*	4.87 (1.84)	5.98 (1.25)	5.78 (1.29)
good-natured	4.98 (1.84)*	5.46 (1.83)	6.50 (1.30)	6.52 (1.00)
confident	4.15 (1.61)*	4.36 (1.77)*	5.69 (1.58)	5.64 (1.62)
emotionally stable	4.65 (1.51)*	4.90 (1.56)*	6.21 (1.38)	6.18 (1.03)
honest	5.17 (2.05)	5.41 (1.78)	6.56 (1.36)	6.44 (1.35)
empathetic	4.08 (1.90)*	4.93 (1.87)	6.08 (1.38)	5.84 (1.34)
sincere	4.71 (2.02)*	4.90 (2.00)	6.33 (1.53)	6.32 (1.31)
considerate of others	4.83 (1.93)*	5.15 (2.03)	6.29 (1.38)	6.38 (1.27)
Intellectual Items				
bright	4.02 (1.38)*	4.64 (1.73)	5.81 (1.44)	5.74 (1.44)
clear thinking	3.88 (1.83)*	4.50 (1.77)	5.79 (1.40)	5.93 (1.52)
curious	3.38 (1.84)*	3.84 (2.18)	5.31 (1.72)	5.42 (1.73)

* $p < .05$ between group differences

NOTE: Alpha set at .05 ÷ 20

Table 7 Cont'd

Medians of Six Teacher Ratings for Classroom Behavior

Item	8th Grade Highest-Risk 20 wk M (SD)	Highest-Risk 40 wk M (SD)	At-Risk 20 wk M (SD)	At-Risk 40 wk M (SD)
Task-Related Items				
follows directions	4.54 (2.09)	4.50 (2.13)	5.67 (1.37)	6.00 (1.22)
eager, enthusiastic	3.71 (1.90)	3.66 (1.93)*	5.13 (1.69)	5.52 (1.67)
begins and completes tasks	3.68 (2.26)*	4.00 (2.14)*	5.58 (1.61)	6.02 (1.51)
attention span appropriate	3.91 (2.17)	4.25 (2.18)*	5.54 (1.69)	6.02 (1.31)
willingly participates	4.03 (2.27)	4.44 (2.06)	5.59 (1.57)	6.00 (1.79)
academic achievement	3.47 (1.92)	3.69 (2.06)*	5.23 (1.71)	5.88 (1.51)
completes work	3.71 (2.33)	3.75 (2.40)*	5.48 (1.61)	6.00 (1.52)
alert, attentive	3.79 (2.17)	3.97 (2.00)	5.31 (1.77)	5.75 (1.73)
Personal-Social Items				
well accepted by peers	5.65 (1.33)	5.63 (1.47)	6.06 (1.19)	6.25 (1.19)
socially adjusted	5.06 (1.47)	5.19 (1.58)	5.90 (1.47)	6.07 (1.30)
good-natured	5.77 (1.52)	5.69 (1.37)	6.33 (1.35)	6.56 (1.11)
confident	4.29 (1.61)	4.63 (1.66)	5.60 (1.52)	5.85 (1.43)
emotionally stable	5.41 (1.59)	4.97 (1.72)	6.08 (1.29)	6.23 (1.16)
honest	5.77 (1.43)	5.13 (1.82)	6.29 (1.19)	6.48 (1.22)
empathetic	5.24 (1.45)	4.59 (1.51)	5.79 (1.29)	6.06 (1.47)
sincere	5.32 (1.57)	5.03 (2.02	5.98 (1.25)	6.29 (1.50)
considerate of others	5.29 (1.80)	4.78 (1.73)	5.97 (1.45)	5.96 (1.41)
Intellectual Items				
bright	4.21 (1.52)*	4.45 (1.65)*	5.83 (1.29)	6.21 (1.06)
clear thinking	4.09 (1.81)	4.25 (1.80)*	5.27 (1.42)	6.15 (1.26)
curious	3.44 (1.64)	3.75 (1.72)	4.82 (1.89)	5.27 (1.47)

* $p < .05$ between group differences

NOTE: Alpha set at .05 ÷ 20

Table 8
Family Characteristics Survey

Question		Highest-Risk	n	At-Risk	n
# siblings ≤ 18 yr.	0	.13	16	.13	24
	1-3	.75		.54	
	4+	.13		.33	
non-siblings in home	yes	.19	16	.08	24
	no	.81		.92	
non-parent adults in home	yes	.25	16	.13	24
	no	.75		.88	
guardian married status	married	.63	16	.58	24
	no	.37		.42	
parents divorced	yes	.06	16	.25	24
mother works	yes	.57	14	.61	23
	no	.43		.39	
mother works	full time	.71	7	.71	14
	part time	.29		.29	
father works	yes	.100	13	.82	17
	no	.00		.18	
father works	full time	.83	12	.85	13
	part time	.17		.15	
guardians in home	mother & father	.63	16	.63	24
	mother only	.13		.21	
	mother & stepfather	.06		.00	
	father & stepmother	.06		.04	
	mother & other	.06		.08	
	father & other	.06		.08	
	other	.00		.04	
# of people living in home	2-3	.13	16	.20	24
	4-5	.31		.29	
	6-7	.38		.46	
	8-9	.06		.08	
	10-11	.13		.04	
quiet place to study	yes	.87	15	.88	24
	no	.13		.13	

Table 8
Family Characteristics Survey

Question		Highest-Risk	n	At-Risk	n
parent's reward/punish	yes	.88	16	.75	24
	no	.13		.25	
mother speaks English	yes	.47	15	.52	23
	no	.53		.48	
father speaks English	yes	.79	14	.72	18
	no	.21		.28	
siblings dropped out	yes	.19	16	.13	24
	no	.81		.88	
# of sibling dropped out	0	.81	16	.91	23
	1	.13		.04	
	2+	.06		.04	
siblings good grades	yes	.88	16	.91	23
	no	.13		.09	
sibling same sex (good grades)	yes	.62	13	.45	20
	no	.39		.55	
# siblings (good grades)	0	.13	15	.09	22
	1	.53		.36	
free lunch	yes	.56	16	.58	24
	no	.38		.38	
	part-free	.06		.04	
will you graduate	yes	.100	16	.100	16
	no	.00		.00	
know what career	yes	.46	11	.69	16
	no	.55		.31	

Table 9

RESULTS OF MULTIPLE REGRESSION MODELS

RESULTS OF 6TH GRADE TEACHER RATINGS PREDICTING 8TH GRADE RATE OF REFERRAL

MULTIPLE REG. MODELS	STEPWISE MODELS		FINAL RE-MODELS	
All Students				
20wk R^2 =.255, P =.08	Teachability	R^2 =.227	Teach.	R^2 =.227, P =.003
40wk R^2 =.316, P =.023	Social	R^2 =.218	Social	R^2 =.218, P =.003
Total R^2 =.299, P =.042	Teach/Potent.	R^2 =.270	Teach.	R^2 =.215, P =.004
Highest-Risk Students				
20wk R^2 =.803, P =.001	Teach/Social	R^2 =.759	Tch/Soc	R^2 =.759, P =.000
40wk R^2 =.415, P =.297	Social	R^2 =.335	Social	R^2 =.335, P =.019
Total R^2 =.727, P =.012	Teach/Social	R^2 =.703	Tch/Soc	R^2 =.703, P =.000
At-Risk Students				
20wk R^2 =.235, P =.494	Not Significant		Not Significant	
40wk R^2 =.460, P =.045	Not Significant		Not Significant	
Total R^2 =.384, P =.16	Not Significant		Not Significant	

RESULTS OF 6TH GRADE TEACHER RATINGS PREDICTING 8TH GRADE SELECTIVE TRUANCY

MULTIPLE REG. MODELS	STEPWISE MODELS		FINAL RE-MODELS	
All Students				
20wk R^2 =.314, P =.015	Motivation	R^2 =.266	Motivat.	R^2 =.266, P =.000
40wk R^2 =.356, P =.006	Motivation	R^2 =.253	Motivat.	R^2 =.253, P =.001
Highest-Risk Students				
20wk R^2 =.305, P =.309	Potent/Social	R^2 =.273	Not Significant	
40wk R^2 =.809, P =.000	Tch/Soc/Pot.	R^2 =.794	Soc/Potent	R^2 =.748, P =.0
At-Risk Students				
20wk R^2 =.670, P =.003	Mot/Super/Pot	R^2 =.65	Super/Mot.	R^2 =.594, P =.0
			Mot/Pot.	R^2 =.503, P =.0
40wk R^2 =.576, P =.008	Supervis/Motiva.	R^2 =.54	Super/Mot.	R^2 =.544, P =.0

Table 9

RESULTS OF MULTIPLE REGRESSION MODELS

RESULTS OF 6TH GRADE TEACHER RATINGS PREDICTING 8TH GRADE WORK HABITS

MULTIPLE REG. MODELS	STEPWISE MODELS	FINAL RE-MODELS
All Students		
20wk R^2 =.251, P =.042	Motivation R^2 =.234	Motivat. R^2 =.234, P =.001
40wk R^2 =.309, P =.017	Teachability R^2 =.238	Teach. R^2 =.238, P =.001
Highest-Risk Students		
20wk R^2 =.377, P =.171	Teachability R^2 =.278	Teach. R^2 =.278, P =.014
40wk R^2 =.336, P =.318	Teachability R^2 =.299	Teach. R^2 =.299, P =.015
At-Risk Students		
20wk R^2 =.435, P =.063	Motivat/Soc. R^2 =.356	Mot/Soc. R^2 =.356, P=.012
40wk R^2 =.325, P =.204	Not Significant	Not Significant

RESULTS OF 6TH GRADE TEACHER RATINGS SCORES PREDICTING 8TH GRADE COOPERATION

MULTIPLE REG. MODELS	STEPWISE MODELS	FINAL RE-MODELS
All Students		
20wk R^2 =.32, P =.009	Motivat/Pot. R^2 =.273	Mot/Pot. R^2 =.273, P =.001
40wk R^2 =.227, P =.087	Teachability R^2 =.163	Teach. R^2 =.163, P =.008
Highest-Risk Students		
20wk R^2 =.606, P =.01	Social/Teach. R^2 =.575	Soc/Tch. R^2 =.575, P =.000
40wk R^2 =.504, P =.074	Social/Teach. R^2 =.455	Teach. R^2 =.455, P =.008
At-Risk Students		
20wk R^2 =.418, P =.077	Not Significant	Not Significant
40wk R^2 =.139, P =.736	Not Significant	Not Significant

Table 9

RESULTS OF MULTIPLE REGRESSION MODELS

RESULTS OF 6TH GRADE TEACHER RATINGS PREDICTING 8TH GRADE ABSENCE (PERIODS)

MULTIPLE REG. MODELS	STEPWISE MODELS		FINAL RE-MODELS
All Students			
20wk R^2 =.227, P =.086	Motiva/Potent.	R^2 =.182	Mot/Pot. R^2 =.182, P =.020
40wk R^2 =.224 P =.091	Not Significant		Not Significant
Total R^2 =.241, P =.081	Motiva/Super.	R^2 =.198	Mot/Sup. R^2 =.198, P =.017
Highest-Risk Students			
20wk R^2 =.643, P =.006	Super/Soc/Pot.	R^2 =.579	Sup/Soc/Pot R^2 =.579, P=.0
40wk R^2 =.579, P =.03	Soc/Pot/Super.	R^2 =.561	Soc/Pot/Sup R^2 =.561, P=.0
Total R^2 =.670, P =.007	Super/Soc/Pot.	R^2 =.641	Sup/Soc/Pot R^2 =.641, P=.0
At-Risk Students			
20wk R^2 =.642, P =.005	Not Significant		Not Significant
40wk R^2 =.546, P =.013	Not Significant		Not Significant
Total R^2 =.648, P =.004	Motiva/Super.	R^2 =.493	Mot/Super R^2 =.493, P=.0

RESULTS OF 6TH GRADE TEACHER RATINGS PREDICTING 8TH GRADE REPORT CARDS (GPA)

MULTIPLE REG. MODEL	STEPWISE MODEL	FINAL RE-MODEL
All Students		
20wk R^2 =.381, P =.002	Motivation R^2 =.355	Motivat. R^2 =.355, P =.000
40wk R^2 =.286, P =.028	Teachability R^2 =.245	Teach. R^2 =.245, P =.001
Highest-Risk Students		
20wk R^2 =.527, P =.032	Teachability R^2 =.285	Teach. R^2 =.285, P =.013
40wk R^2 =.21, P =.64	Not Significant	Not Significant
At-Risk Students		
20wk R^2 =.595, P =.005	Motivat/Super. R^2 =.554	Mot/Super. R^2 =.554, P =.0
40wk R^2 =.642, P =.002	Motivat/Super. R^2 =.576	Mot/Super. R^2 =.576, P =.0

Table 9

RESULTS OF MULTIPLE REGRESSION MODELS

RESULTS OF 6TH GRADE CTBS SCORES PREDICTING 8TH GRADE ATTENDANCE PERIODS

MULTIPLE REG. MODELS	STEPWISE MODELS	FINAL RE-MODELS
All Students		
20wk R^2 =.060, P =.754	Not Significant	Not Significant
40wk R^2 =.019, P =.967	Not Significant	Not Significant
Total R^2 =.019, P =.968	Not Significant	Not Significant
Highest-Risk Students		
20wk R^2 =.350, P =.234	Language R^2 =.239	Not Significant
40wk R^2 =.323, P =.372	Not Significant	Not Significant
Total R^2 =.363, P =.295	Language R^2 =.203	Not Significant
At-Risk Students		
20wk R^2 =.145, P =.701	Not Significant	Not Significant
40wk R^2 =.096, P =.825	Not Significant	Not Significant
Total R^2 =.072, P =.904	Not Significant	Not Significant

RESULTS OF 6TH GRADE CTBS SCORES PREDICTING 8TH GRADE SELECTIVE TRUANCY

MULTIPLE REG. MODELS	STEPWISE MODELS	FINAL RE-MODELS
All Students		
20wk R^2 =.091, P =.564	Math R^2 =.071	Not Significant
40wk R^2 =.128, P =.390	Spelling R^2 =.069	Not Significant
Highest-Risk Students		
20wk R^2 =.249, P =.447	Not Significant	Not Significant
40wk R^2 =.397, P =.238	Not Significant	Not Significant
At-Risk Students		
20wk R^2 =.282, P =.329	Not Significant	Not Significant
40wk R^2 =.127, P =.731	Not Significant	Not Significant

Table 9

RESULTS OF MULTIPLE REGRESSION MODELS

RESULTS OF 6TH GRADE CTBS SCORES PREDICTING 8TH GRADE REPORT CARDS (GPA)

MULTIPLE REG. MODEL	STEPWISE MODEL	FINAL RE-MODEL
All Students		
20wk R^2 =.146, P =.316	Math R^2 =.132	Math R^2 =.132, P =.018
40wk R^2 =.255, P =.084	Math R^2 =.210	Math R^2 =.231, P =.002
Highest-Risk Students		
20wk R^2 =.237, P =.519	Not Significant	Not Significant
40wk R^2 =.181, P =.739	Not Significant	Not Significant
At-Risk Students		
20wk R^2 =.134, P =.735	Not Significant	Not Significant
40wk R^2 =.204, P =.527	Not Significant	Not Significant

RESULTS OF 6TH GRADE CTBS SCORES PREDICTING 8TH GRADE WORK HABITS

MULTIPLE REG. MODELS	STEPWISE MODELS	FINAL RE-MODELS
All Students		
20wk R^2 =.054, P =.795	Not Significant	Not Significant
40wk R^2 =.123, P =.451	Not Significant	Not Significant
Highest-Risk Students		
20wk R^2 =.295, P =.383	Language R^2 =.209	Not Significant
40wk R^2 =.357, P =.358	Lang/Math R^2 =.326	Not Significant
At-Risk Students		
20wk R^2 =.115, P =.790	Not Significant	Not Significant
40wk R^2 =.083, P =.877	Not Significant	Not Significant